Outcomes Assessment: Summaries and Plans
Department of Biology and Wildlife
December 2010

Assessment Plans
We are making significant changes to our outcomes assessment plan to better address our goals, and to reflect changes to the course that previously contained a “capstone project” (Biol 481). This fall we are trialing the use of the ETS Field Test in Biology in Biol. 481 (required for all Biological Sciences majors). We will evaluate the results in the fall and determine if and how we will use this test in the future. Other issues to address in the next 3 months include distinctions in expectations for BA vs. BS students, and improving methods for tracking graduates from the bachelor’s programs.

Assessment Summaries AY 2008-2010

A. BA and BS in Biological Sciences, BS in Wildlife Biology & Conservation
1. Survey data collected: In each year students were surveyed in Biol. 481 a required “capstone” course. The survey consists of 89 items, and these have been consistent since 1999. Survey numbers are as follows: AY06-07: 53; AY07-08: 29 (done in only one of the semesters); AY09-09: 16; AY 09-10: 31.
2. “Capstone” projects completed in Biol 481. This senior capstone course provides an opportunity to assess abilities of our graduating seniors to design and conduct research projects and present these projects in oral and written formats. AY06-07: 38 projects. AY07-08: 40 projects. AY 08-09: not reported. Capstone projects were dropped in 2009-2010 with approval from the B&W Teaching Advisory Committee, (TAC), because facilitating the projects was too demanding a teaching obligation in addition to the lecture and laboratory components of the course.
3. Changes made to the curriculum: Most of these changes are for one of four reasons: 1) to strengthen the background of students in courses to increase student success in courses; 2) to remove “moldy” courses from the catalogue, 3) to increase the availability of O- and W-designated courses or 4) to take advantage of new faculty expertise. These changes have resulted in a more rigorous program and higher pass-rates, particularly in the introductory sequence.

a. Program / Degree Revisions
1. B.S., Biological Sciences - Added BIOL 261 (Cellular and Molecular Biology) to degree requirements; effective Fall 2007. This was in response to the results of a standardized test demonstrating that this was an area of weakness for graduating seniors.
2. B.S., B.A. Biological Sciences – Added Phys 103 as a requirement for the BA, and PHYS 103 / 104 or PHYS 211 and 212 for the BS; deleted an equivalent number of Biology electives (4) from the degree requirements; effective Fall 2008. These were in response to concern about relatively poor quantitative and problem solving skills
that our students have, and also to bring the program in line with that of peer institutions.

3. Biol. 115X and Biol 116X: Fundamentals of Biology I and II, 4 credits each (3+3). Replaced Biol 105 / 106. Material was swapped between the two courses to ensure better alignment with the book and for other pedagogical reasons. Chem 105 was added as a pre- or co-requisite for Biol 115 to ensure that all students have the required chemistry background to be able to follow the course. Biol. 115 was made a prerequisite for Biol 116 to ensure all students have a similar biology background.

4. B.S., Wildlife Biology - Add course option of BIOL 471, 433, and 479; effective Fall 2007.

5. B.A., Biological Sciences; BIOL F261 - Intro to Cell and Molecular Biology – was added as a required course; effective Fall 2009. This was in response to the results of a standardized test demonstrating that this was an area of weakness for graduating seniors, and brings the BA core courses back in line with those for the BS.

b. Course revisions

1. WLF 101 – Survey of Wildlife Science, 1.5 credits (1+0+1.5); change from lecture to lecture and field campus; change from Spring to Fall; effective Fall 2008. This was in response to concerns that students were not receiving enough training in field techniques.

2. WLF 201 – Wildlife Management Principles, 3 credits (2+3); changed prerequisites to add WLF 101, NRM 101; offered spring; effective Spring 2009. This is consistent with expectations for a 200-level course.

3. WLF 460 – Wildlife Nutrition, 3 credits (3+0); add a lab component and change to 4 credits, (3+3); change course description; offered Fall; effective Fall 2008.


5. Biol 445 – Molecular Evolution, 4 credits (3+3); change to 3 credits (2+3); change title to Molecular Ecology and Evolution; change course description; change offering to fall of odd-numbered years; effective Fall 2009. This was to align course description to content and ensure sufficient demand.

6. Biol 455 OW – Environmental Toxicology, 3 credits (3+0); stacked with Biol 655 and cross-listed with CHEM 455/655. Add prerequisites of of Chem 451 or Biol 303 or one semester each of organic chem and cell or molecular biology. Added “O” and “W” designators. This was to ensure students had adequate background and to expand our offerings of O- and W-designated courses.

c. Course additions
1. Biol 433/WLF 433 - Conservation Genetics, 3 credits (3+0); offered Spring, effective Fall 2007. A faculty member with expertise in this area was added. This is an area of high interest to the wildlife program.

2. Biol 462 – Concepts of Infectious Diseases, 3 credits (3+0). Stacked Biol 662, offered Alternate Spring; effective Fall 2007. A faculty member with expertise in this area was added. This course contributes to the development of a biomedical program.

3. BIOL 493O – Principles of Human Genetics, 3 credits (3+0); effective Spring 2008 only. This course increased our offerings of oral-intensive courses (public-small).

4. Biol F486 – Vertebrate Paleontology, 3 credits (2+3); crosslisted with GEOS F486 and GEOS / BIOL F686; offered alternate spring, first offered Spring 2011. This takes advantage of additional expertise from a new faculty member in Geology.

5. Biol. 472 – Concepts of Infectious Diseases, 3 credits (3+0): Addition of O designator. This increased access to oral-intensive courses.


d. Course Deletions

1. BIOL 300W – Research Ethics, 3 credits (3+0); effective Fall 2008. Replaced by a campus-wide course in research ethics.

2. BIOL 407 – Aquatic entomology (n), 3 credits (2+3); effective Fall 2008. Not taught in many years.

3. BIOL 442W O/2 – Advanced Microbiology (n), 4 credits (2+6); effective Fall 2008. Not taught in many years.

4. BIOL 444 – Reproductive Biology, 3 credit (3+0); effective Fall 2008. Not taught in many years.

5. BIOL 461 – Cell Biology (n), 4 credits (3+3); stacked with BIOL 661 and cross-listed with CHEM 461/661; effective Fall 2008. Replaced with a 200-level course; this is more appropriate since students did not have a background in this area.

6. BIOL 484 – Molecular Ecology (n), 3 credits (2+4); stacked with BIOL 684; effective Fall 2008. Not taught for many years.

7. Biol 104 - Natural History of Alaska – 3 credits (3+0): dropped BIOL 104 and BIOL 104 L sessions, but NOT Natural History of Alaska. Previously students could take the lecture and lab separately; this did not allow for any interactions between lab and lecture sections and was added unnecessary complication.

8.

B. MS in Biology, MS in Wildlife Biology and Conservation, and PhD in Biological Sciences

1. Degree recipients.